

Is hyaluronic acid effective in patients with osteoarthritis of the knee?

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QUESTION

In patients with osteoarthritis of the knee, is hyaluronic acid effective in relieving symptoms?

DESIGN

Randomized (unclear allocation concealment), blinded, placebo-controlled trial with 6-month follow-up.

SETTING

A hospital outpatient clinic in London, England.

PATIENTS

One hundred patients (mean age 65 years, 67% of whom were women) who had osteoarthritis of 1 or both knees according to the criteria of the American Rheumatism Association, changes in osteoarthritis (Kellgren and Lawrence grade II or III) on radiography in the previous 6 months, consistent pain in the previous 3 months, and moderate or severe pain on walking. Exclusion criteria were grade IV changes on radiography, functional impairment of the knee, associated osteoarthritis of any other joint that might affect assessment of the knee, psoriasis, other joint diseases or infection, other painful knee conditions, serious medical illness, skin conditions overlying the joint, or intra-articular use of steroids or radiocolloids in the previous 3 months. Follow-up at 6 months was 81%.

INTERVENTION

Patients were allocated to receive hyaluronic acid, 20 mg in 2 mL of aqueous solution (n = 50), or placebo (n = 50), given in 5 weekly intra-articular injections.

MAIN OUTCOME MEASURES

Knee pain on walking (100-mm visual analog scale) and knee function (Lequesne functional index).

MAIN RESULTS

Patients in the group receiving hyaluronic acid had less pain on walking at 5 weeks ($P = 0.009$) and 6 months ($P = 0.005$) than did patients in the placebo group (table). Knee function was

more improved in the hyaluronic acid group at week 5 than in the placebo group ($P = 0.04$); the difference persisted to 4 months (table).

CONCLUSION

In patients with osteoarthritis of the knee, hyaluronic acid was effective in reducing pain on walking at 6 months and improving knee function for 4 months.

*Hyaluronic acid (HA) versus placebo for osteoarthritis of the knee**

Outcomes	Mean scores HA	Mean scores Placebo	Mean score difference (95% CI)
Walking pain at 5 wk	27.5	40.6	13.1 (1.4-24.8)
Walking pain at 6 mo	39.4	53.7	14.9 (1.4-27.2)
Knee function at 5 wk	10.0	12.1	2.1 (0.2-4.0)
Knee function at 4 mo	10.2	12.4	2.2 (0.2-4.2)

CI = confidence interval.

*Mean scores obtained from 100-mm visual analog scale and Lequesne functional index. Mean score differences favor the HA group.